AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method of detecting mild impaired glucose tolerance or an insulin secretory defect in a subject, wherein the method comprises:

providing ~~a sample~~ urine samples from a subject, wherein the samples are ~~sample is~~ obtained before and after glucose load, or before and after a meal;

quantitatively determining the myo-inositol level in ~~a sample~~ the samples; and

determining that the subject has mild impaired glucose tolerance or that the subject has an insulin secretory defect based on the concentration of myo-inositol in the ~~sample~~ samples,

wherein a concentration of myo-inositol at [[a]] characteristic ~~value~~ values or higher than [[a]] characteristic ~~value~~ values indicates the subject has mild impaired glucose tolerance or the subject has an insulin secretory defect.

2. (Original) The method according to claim 1, wherein the quantitative determination of myo-inositol level in the sample is carried out using an enzyme.

3. (Original) The method according to claim 2, wherein the enzyme is myo-inositol dehydrogenase.

4. (Original) The method according to claim 2 or 3, wherein the quantitative determination of the myo-inositol level using the enzyme is carried out by an enzymatic cycling method.

5. (Previously Presented) The method according to claim 1 or 2, wherein the myo-inositol level is quantitatively determined after elimination of sugars other than myo-inositol in the sample.

6. (Previously Presented) The method according to claim 5, wherein two kinds of kinases are simultaneously used for the reaction of eliminating sugars other than myo-inositol in the sample.

7. (Previously Presented) The quantitative method according to claim 6, wherein said two kinds of kinases are ATP-hexokinase and ADP-hexokinase.

8. (Previously Presented) The quantitative method according to claim 2, wherein thio-NAD is used as a coenzyme at a final concentration of 0.1 mM or more in the reaction of quantitatively determining myo-inositol.

9. (Previously Presented) The quantitative method according to claim 2, wherein thio-NAD is used as a coenzyme at a final concentration of 2 to 10 mM in the reaction of quantitatively determining myo-inositol.

10. – 11. (Cancelled)

12. (Currently Amended) The method according to claim 1 or 2, wherein ~~the sample is urine and~~ the characteristic value is 0 to 20 μg myo-inositol per mg creatinine when measured as an increasing amount of myo-inositol excreted in the urine after 75g glucose load.

13. (Currently Amended) The method according to claim 1 or 2, wherein ~~the sample is urine and~~ the characteristic value is 8 to 12 μg myo-inositol per mg creatinine when measured as an increasing amount of myo-inositol excreted in the urine after 75g glucose load.

14. (Previously Presented) The method according to claim 1 or 2, wherein a glucose level in the sample is quantitatively determined in addition to the myo-inositol level in the sample.

15. - 17. (Cancelled)

18. (Currently Amended) A method of quantitatively and enzymatically determining myo-inositol level ~~in a sample~~ comprising:

obtaining a urine sample before and after glucose load, or before and after a meal; and ~~enzymatically~~ using myo-inositol dehydrogenase in the presence of thio-NAD or NADH, wherein two kinds of kinases are used in combination, to quantitatively and enzymatically determine the myo-inositol level in the samples.

19. (Previously Presented) The method according to claim 18, wherein said two kinds of kinases are ATP-hexokinase and an ADP eliminating agent.

20. (Original) The method of eliminating glucose according to claim 19, wherein the ADP eliminating agent is ADP-hexokinase.

21. - 26. (Cancelled)

27. (Currently Amended) A method of eliminating glucose in ~~a sample~~ urine samples obtained before and after glucose load, or before and after a meal, which comprises:

reacting ATP with glucose in the ~~sample~~samples to ~~covert~~ convert them to ADP and glucose-6-phosphate; and

reacting the thus obtained ADP with glucose in the ~~sample~~samples to ~~covert~~convert them to AMP and glucose-6-phosphate.

28. (Currently Amended) The method of detecting mild impaired glucose tolerance or insulin secretory defect according to claim 1 or 2, wherein the myo-inositol level is quantitatively determined after glucose in the sample is eliminated by a method comprising:

reacting ATP with glucose in the sample to ~~covert~~convert them to ADP and glucose-6-phosphate; and

reacting the thus obtained ADP with glucose in the sample to ~~covert~~convert them to AMP and glucose-6-phosphate.

29. (Cancelled)

30. (New) A method of detecting mild impaired glucose tolerance or an insulin secretory defect in a subject, wherein the method comprises:

providing urine samples from a subject, wherein the urine samples are obtained before and after glucose load, or before and after a meal;

quantitatively determining the myo-inositol level in the urine samples; and

determining that the subject has mild impaired glucose tolerance or that the subject has an insulin secretory defect based on the concentration of myo-inositol in the samples,

wherein an increase in the concentration of myo-inositol in the urine sample obtained after glucose load or after the meal over the concentration of myo-inositol in the urine sample obtained before glucose load or before the meal at a characteristic value or higher than a characteristic value indicates the subject has mild impaired glucose tolerance or the subject has an insulin secretory defect.

31. (New) A method of detecting mild impaired glucose tolerance or an insulin secretory defect in a subject, wherein the method comprises:

providing a sample from a subject;

quantitatively determining the myo-inositol level and the glucose level in said sample; and

determining that the subject has mild impaired glucose tolerance or that the subject has an insulin secretory defect based on the concentration of myo-inositol and glucose in the sample,

wherein concentrations of myo-inositol and glucose at characteristic values or higher than characteristic values indicates the subject has mild impaired glucose tolerance or the subject has an insulin secretory defect.